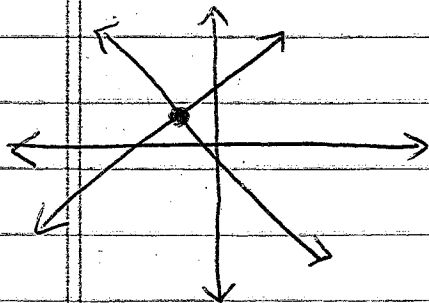


SYSTEMS OF EQUATIONS

SOLVE BY GRAPHING

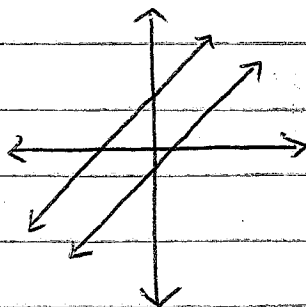
CASE 1



INDEPENDENT SYSTEM

ONE SOLUTION: (x, y)

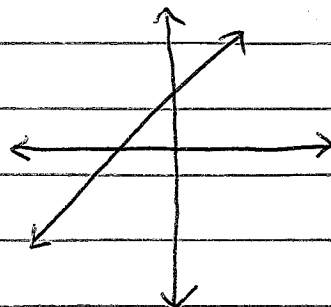
CASE 2



INCONSISTENT SYSTEM

SAME SLOPES: \emptyset

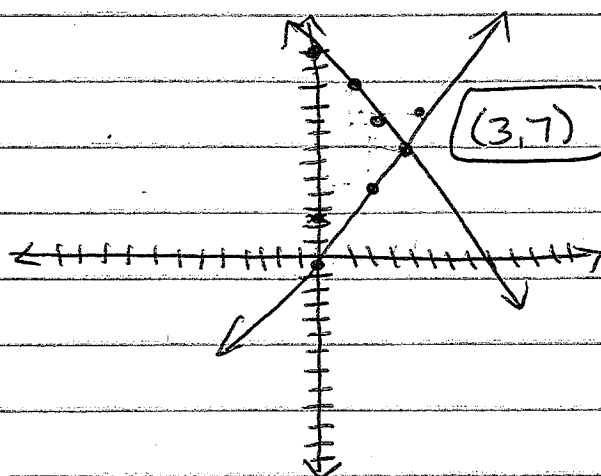
CASE 3



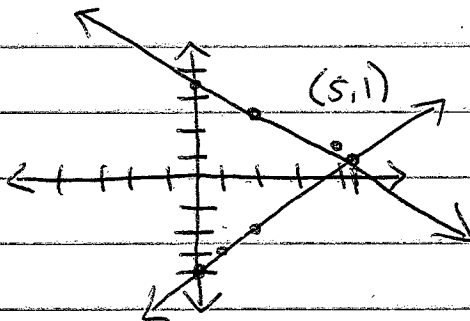
DEPENDENT SYSTEM

SAME LINE: INFINITELY
MANY SOLUTIONS

Ex 4 $\begin{cases} 2x + y = 13 \\ 5x - 2y = 1 \end{cases} \quad \begin{aligned} y &= -2x + 13 \\ y &= \frac{5}{2}x - \frac{1}{2} \end{aligned}$



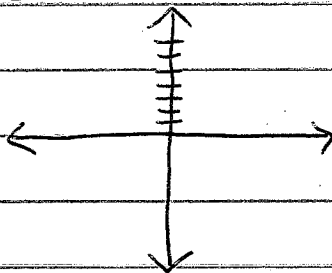
Ex 1 $\begin{cases} x + 2y = 7 \Rightarrow 2y = -x + 7 \Rightarrow y = -\frac{1}{2}x + \frac{7}{2} \\ x = y + 4 \Rightarrow y = x - 4 \end{cases}$



Ex 2 $\begin{cases} y - 2x = 7 \Rightarrow y = 2x + 7 \\ y = 2x + 3 \end{cases}$

SAME SLOPE // LINES

\emptyset



Ex 3 $\begin{cases} -3x = 5 - y \Rightarrow y = 3x + 5 \\ 2y = 6x + 10 \Rightarrow y = 3x + 5 \end{cases}$

SAME LINE

INFINITELY
MANY